

AMENDMENTS TO THE SPECIFICATION:

Please replace the Title Of The Invention with the following new Title:

"DIGITIZATION OF FIELD ENGINEERING WORK PROCESSES AT A GAS TURBINE POWER PLANT THROUGH THE USE OF PORTABLE COMPUTING DEVICES OPERABLE IN AN ON-SITE WIRELESS LOCAL AREA NETWORK"

Please replace paragraph 1 with the following amended paragraph:

[0001] This invention relates to data acquisition and control of machinery, and more particularly, to an apparatus and method for the digitization of field service engineering work processes at a gas turbine power plant using a communication network with wearable end user devices.

Please replace paragraph 23 with the following amended paragraph:

[0023] Referring now to Figure 1, there is shown a schematic diagram illustrating the inspection and control of power plant machinery according to the present invention. Here, a power plant generally indicated at 10 includes a gas turbine engine 11. Power plant 10 is coupled to a processor system 12 such as, for example, a "human machine interface (HMI)". Application software such as, for example, Netmeeting™ available from Microsoft Corporation, may be used to communicate data between processor system 12 and the wearable computer 16 carried by the mobile user 17. Operational data from gas turbine 11 are received by the processor system 12. The processor system 12 may include a database system 13 for storing operational data and forwarding the stored data to a wireless interface unit 14 such as, for example, a

wireless access point. Operational data received by the interface unit 14 is communicated to at least one of a mobile computing unit 18 and a wearable computer 16, adapted to be carried by a mobile user 17. The wearable computer 16 is preferably of the type worn by field personnel for easy data entry. The processor system 12 includes a controller 15 for receiving instructions, from a field engineer/mobile user 17 carrying the wearable computer 16, and ~~[[vary]]~~ varying the operational parameters of gas turbine 11.

Please replace paragraph 24 with the following amended paragraph:

[0024] The mobile user 17 is communicatively linked to a corporate server system 52 via a network generally indicated at 38. Server 52 preferably includes a database system having a plurality of web portal applications stored therein for use by the mobile user 17. The web portal applications from server 52 are routed via a corporate router network 50 and a communication network 48, such as, for example an ATM switching network. Switched signals from communication network 48 are transmitted through router 46 via a wide area network (WAN) interface 44 to be received by network 38 via an antenna assembly 30. Signals from WAN 44 are preferably transmitted in a wireless fashion, and preferably via a satellite communications link 42, 40. Network 38 preferably includes a satellite transceiver 28 communicatively coupled to satellite networking equipment such as a Single Channel Demand Assigned Multiple Access (DAMA) chassis with IP data interface 26 available

from TIW Systems, Inc. Further, network 38 also includes an ethernet hub 24 with a 6-port wireless LAN 22, and a 4-port voice-over-internet-protocol (VOIP) gateway 32.

Gateway 32 is coupled to a private-branch exchange (PBX) 34 for communicating voice data to users at location 36. Application data or web portal data from server 52 is transmitted to wireless interface 14 via a wireless hub 20. A mobile user 17 carrying wearable computer 16 may access the data received by the wireless interface 14.

Mobile user 17 is thus capable of not only performing inspection, but also operate the power plant 10 by accessing power plant application data stored in server 52 to control the power plant 10.

Please replace paragraph 28 with the following amended paragraph:

[0028] Referring now to Figure 4, there is shown a flow-chart to measure and control a power plant machinery by a remote field engineer/mobile user 17. The mobile user 17 starts the process of inspection as identified in step 64. During step 66, after performing inspection of the power plant 10, the mobile user 17 receives power plant data in the wearable computer 16, the data being communicated through wireless interface unit 14 and hub 20 ~~hub 14~~. At 68, the mobile user 17 determines whether or not the received power plant data is within predetermined parameters. If the received data is within acceptable parameters, then no further adjustments of the power plant are necessary and the process stops at step 74. If the received power plant data is outside of the predetermined range, then it is determined that active control of the power plant is needed. The mobile user 17 then downloads software applications 70 to the wearable computer 16 from corporate server system 52 via wireless network which, for example,

includes components identified by numerals 38, 40, 14, 44, 46, 48, 50. After downloading the software applications to wearable computer 16, user 17 performs control functions, as indicated at step 72, to adjust the operational characteristics of the power plant 10. This process is a closed-loop process which is repeated until the measured power plant data lies within predetermined values.

Please replace paragraph 29 with the following amended paragraph:

[0029] Referring now to Figure 5, a second embodiment is illustrated wherein like elements as in the communication system of Figure 1 are indicated by like reference numerals preceded by the prefix "1". Here, information from wireless access point 114 is forwarded through ethernet hub 120 to a virtual private network (VPN) accelerator 54, routed through router 56 and via satellite communications link 58, 140 and 142 to corporate network server [[52]] 152 through communication network 64. The communication network 64 includes, for example, virtual private network (VPN) tunnel 60, and a packet switching network, such as for example, internet 62, and a router 56. It will be understood that the communication network shown in Figure 5 is exemplary, and that various components may be added or removed without deviating from the spirit of the invention.